

**Remarks/Arguments:**

Claims 1-28, 31 and 33-43 were pending at the time of the Office Action. All of the independent claims are amended herewith to recite a composite film having a WVTR (water vapor transmission rate) of at least 60 g/m<sup>2</sup>/day. See application page 3, lines 27-28. New claims 44-46 are added herewith, as supported in the application as filed at page 12, lines 6-10; page 18, line 20; and page 11, line 18, respectively. New claim 47 is supported by reference to Figures 1 and 2 and claim 15, an in the application from page 6, line 4 to page 7, line 14.

**35 USC § 112**

Claim 23 is rejected under 35 USC § 112, 2<sup>nd</sup> paragraph for referring to claims 2, 3, 11 or 12. Applicants note that they amended claim 23 in their response dated January 5, 2009 to refer only to claim 2. Applicants further amend claim 23 herewith in the manner suggested by the Examiner in section 54 of the Final Office Action, and therefore respectfully request that the rejection be withdrawn.

**35 USC § 103**

Claims 1-5, 8-10, 12-15, 20-24, 27, 36, 41 and 43 are rejected under 35 USC § 103(a) as unpatentable over US 4,587,175 ("Akao 175"). Applicants submit that these claims are not rendered obvious by Akao 175, for the following reasons.

All of the claims relate to a breathable composite film having a WVTR of at least 60 g/m<sup>2</sup>/day. The Office Action points to certain compositional similarities between the films of Akao 175 and those presently claimed, noting that Akao 175 teaches a barrier layer of 15 micron minimum thickness where the present claims recite a maximum of 12 microns. The rejection indicates that it would have been obvious to modify Akao 175 to use a 12-micron barrier layer because 12 microns is close to 15 microns, and asserts that the resultant film would intrinsically have been breathable.

Applicants respectfully disagree that it would have been obvious to use a 12-micron layer in the invention of Akao 175. Even if such a step were taken, however, the resulting film would not have intrinsically (i.e., inherently) had a WVTR of at least 60 g/m<sup>2</sup>/day. The reasons for this follow.

Akao 175 always uses at least three layers: a perforated sheet layer and two "flexible sheet layers", one on each side of the perforated layer.<sup>1</sup> Compositions of the flexible sheet layers include polyethylene terephthalate (PET), high-density polyethylene (HDPE), medium-density polyethylene (MDPE), low-density polyethylene (LDPE), linear low-density polyethylene (L-LDPE), and polypropylene (PP), among others. Polyolefins from this group are used in all of the examples (i.e., Laminates 1-6) in Akao 175 for producing the two flexible sheet layers.

The rejection indicates that it would have been obvious to make the "flexible sheet layers" to a thickness of 12 microns. Since Akao 175 always uses at least two such layers, the total thickness would be at least 24 microns. Enclosed is a Declaration of Stephen William Sankey dated 16 June 2009. Table 1 of the Declaration shows the WVTR values of 25-micron films (essentially the same as 24 microns) made from PET, L-LDPE, HDPE and OPP (oriented PP). Of these, the highest MVTR value by far is for PET, at 27.5 g/m<sup>2</sup>/day. The skilled artisan interested in barrier properties of films would have been aware of the WVTR properties of various materials, including those mentioned above. In particular, and as established by the Declaration, the skilled artisan would have expected the MVTR of a film comprising two 12-micron PET layers to have an MVTR of about 27.5 g/m<sup>2</sup>/day, less than half of the minimum 60 g/m<sup>2</sup>/day recited in the claims. (It should be noted that the actual examples prepared by Akao 175 do not use PET, but rather materials that are even lower in MVTR. See Table 1 of the Declaration. And the layers are all several-fold thicker than 12 microns, still further decreasing WVTR.) The other layer(s) used by Akao 175 in addition to the "flexible sheet layers" could only reduce the MVTR even further.

Further, Dr. Sankey states that "The reason that the unperforated barrier layer is restricted to 12 microns is that, in our work, we found that thicknesses of greater than 12 microns do not demonstrate sufficient permeability to water vapour."<sup>2</sup> Dr. Sankey indicates that such permeability requires a WVTR of at least 60 g/m<sup>2</sup>/day.<sup>3</sup>

Accordingly, the data provided by the Declaration indicate that modifying Akao 175 by reducing the thickness of the "flexible sheet layers" to 12 microns would not have produced a film providing the 60 g/m<sup>2</sup>/day MVTR feature recited in all of the present claims. Therefore, Applicants respectfully request withdrawal of the rejection.

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<sup>1</sup> Akao 175, Abstract

<sup>2</sup> Sankey Declaration, section 3.2

<sup>3</sup> Sankey Declaration, section 3.1

With specific regard to claims 20 and 21, the Office Action asserts<sup>4</sup> that the features recited in these claims would be intrinsically provided by Akao 175. Applicants respectfully disagree. Claims 20 and 21 respectively recite a film according to claim 1 exhibiting a haze of less than 6% and a film having at least 80% total light transmission. The rejection does not indicate specifically which structure(s) taught by Akao 175 purportedly show these properties intrinsically, i.e., inherently. Thus, the rejection constructively asserts that all of the structures taught by Akao 175 teach these features intrinsically. Applicants respectfully disagree with this proposition because some embodiments of the invention include a metal sheet layer or other opaque material<sup>5</sup> to provide a light-shielding property for photosensitive materials. The Examiner will appreciate that a film covered with a metal sheet designed to protect photosensitive materials from light cannot have at least 80% total light transmission. And the record does not indicate how such a film can have a haze of less than 6% of scattered transmitted visible light as measured with a hazemeter by ASTM D-1003-61.<sup>6</sup> Applicants submit that it cannot.

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."<sup>7</sup> As shown above, the record does not establish that the recited light transmission and haze values result from the teachings of Akao 175 relied upon in the Office Action, and thus, they are not inherently (intrinsically) taught. Nor are they explicitly taught. As such, Akao 175 is deficient as a basis for *prima facie* obviousness of claims 20 and 21, and Applicants respectfully request that the rejections be withdrawn. For these same reasons, new claim 45 (reciting "optically clear") should also be allowed.

Claims 1-10, 12-15, 20-24, 27, 28 and 36 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 4,661,401 ("Akao 401"). But the combination of Akao 175 and Akao 401 fails to support *prima facie* obviousness, as will now be explained.

The rejection asserts that "One of ordinary skill ... would be motivated to modify the invention of Akao 175 with that of Akao 401 because Akao 175 which offers reduction in weight

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<sup>4</sup> Office Action, section 6.

<sup>5</sup> Akao 175, column 6, lines 47-60

<sup>6</sup> Application, page 21, lines 22-24

<sup>7</sup> *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original); see MPEP 2112 IV.

of packages as well as prevention in breakage of packages (175 column 1 lines 25-30) would benefit from the improved resistance to impact without reduction of cushioning of Akao 401 (401 column [1] lines 15-20).<sup>8</sup> In their previous response, Applicants noted<sup>9</sup> that adopting the 5-120  $\mu\text{m}$  L-LDPE layer discussed by Akao 401 in place of the 15-120  $\mu\text{m}$  of Akao 175 would not be expected to improve impact resistance. The present Office Action does not contest this point, and Applicants thank the Examiner for clarifying that "Specifically Akao 401 is being used to teach the required thickness for the L-LDPE outer layer. In regards to Applicant's argument regarding the motivation Examiner points out that reduction of weight was also a motivational reason to modify Akao 175."<sup>10</sup>

Applicants note that Akao 175 and Akao 401 share the same inventor, Matsuo Akao. That inventor used 15 microns as the lower thickness limit for the Akao 175 invention, knowing that thinner layers (such as he used in the Akao 401 invention) were available and knowing that they would reduce weight. The skilled artisan therefore would have understood that Akao must not have seen using a thinner layer as suitable for the purposes of his 175 invention, particularly in view of the fact that he did consider it suitable for his 401 invention, in addition to indicating an interest in reducing film weight for purposes of the Akao 175 invention.<sup>11</sup> It is not credible that Akao failed to consider using a thinner film. It is credible, and apparent, that he considered this an untenable solution.

The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success.<sup>12</sup> No one understood what was required for success of the Akao 175 invention better than Akao himself, but he apparently did not consider that using a thinner layer would have provided a reasonable expectation of success or he would have done so to reduce weight. Thus, the record indicates that such thinner layers may be suitable for making the films of the Akao 401 invention, but not for making the films of the Akao 175 invention. And without a reasonable expectation of success, it would not have been *prima facie* obvious to combine the references as proposed. Applicants therefore respectfully request withdrawal of the rejection.

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<sup>8</sup> Office Action, section 18.

<sup>9</sup> Response dated January 5, 2009, page 12, fifth paragraph

<sup>10</sup> Office Action, section 57.

<sup>11</sup> Akao 175, column 1, lines 25-30

<sup>12</sup> *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986, emphasis added); see MPEP 2143.02 I.

Applicants again respectfully submit that Akao 175 cannot be used in an obviousness rejection of the present invention because it deals with non-analogous art. Applicants' provided reasons for this assertion in their previous response. Applicants also now point to the Dr. Sankey's Declaration, which further supports this contention. Dr. Sankey indicates that the person skilled in the art of packaging photosensitive materials would understand the reference in Akao 175 to "control moisture-proofness and gas barrier" as referring to a high gas barrier and a high moisture proofness. Applicants draw the Examiner's attention to sections 5.2, 6.1, 6.3, 6.4 and 7 in the Declaration, underscoring this understanding.

The rejection indicates that Akao 175 involves art analogous to that of the present invention, saying that both relate to films used to package articles. This definition of "field of endeavor" is inappropriate, because it is so broadly stated as to include within it opposite objectives. In particular, the rejection states that breathability of the package would be "the" problem addressed, implying that Akao 175 and the invention address the same problem. But in reality they address opposite problems. The present invention seeks to maximize breathability, while Akao 175 seeks to minimize it. Thus, it is inaccurate to say that they address the same problem. Making a breathable package for live produce is not the same field of endeavor as packaging film to exclude moisture and light. Accordingly, Applicants maintain that Akao 175 is not concerned with art analogous to that of the present invention and submit that it is therefore disqualified as a reference against this invention. For this additional reason, the foregoing rejections should be withdrawn.

Claims 11 and 42 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 4,918,156 ("Rogers").

Claims 16, 37 and 38 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 6,787,630 ("Dominguez").

Claims 17, 39 and 40 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 4,450,250 ("McConnell").

Claims 18 and 19 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 4,172,824 ("Harrington").

Claims 25 and 26 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 6,143,818 ("Wang").

Claims 31, 34 and 35 are rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 5,832,699 ("Zobel").

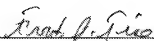
Claim 33 is rejected under 35 USC § 103(a) as unpatentable over Akao 175 in view of US 6,441,340 ("Varriano").

All of these claims depend from claim 1, and their rejections should therefore be withdrawn for the same reasons as elaborated above with respect to claim 1.

Conclusion

Applicants submit that the rejections have been overcome, and respectfully request reconsideration and early notice of same. Applicants invite the Examiner to contact their undersigned representative, Frank Tise, if it appears that this may expedite examination.

Respectfully submitted,

  
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Dated: July 13, 2009

Enclosure: Declaration of Stephen William Sankey dated 16 June 2009

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